



IPW 1639
PATENT # 2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Douglas Levinson

Application No.: 09/994,585

Filed: November 27, 2001

For: RAPID IDENTIFICATION OF
CONDITIONS, COMPOUNDS, OR
COMPOSITIONS THAT INHIBIT,
PREVENT, INDUCE, MODIFY, OR
REVERSE TRANSITIONS OF
PHYSICAL STATE

Atty. Docket No.: TPIP006

Examiner: M. Baker

Group: 1639

Date: May 4, 2004

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, PO Box 1450, Alexandria, VA 22313 on May 4, 2004.

Signed: _____

Jacquie M. Vo
Jacquie M. Vo

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§1.56 AND 1.97(c)

Assistant Commissioner for Patents
PO Box 1450
Alexandria, VA 22313

Dear Sir:

The references listed in the attached PTO Form 1449, copies of which are attached, may be material to examination of the above-identified patent application. Applicants submit these

Attny Dkt No. TPIP006

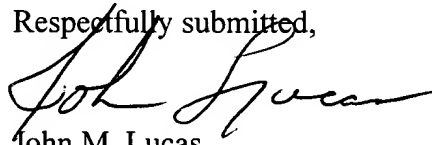
05/18/2004 CCHAUI 00000164 502626 09994585
01 FC:1806 180.00 DA

references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

This Information Disclosure Statement is believed to be filed after the mailing date of a first Office Action on the merits. Accordingly, the Commissioner is hereby authorized to charge the required fee of \$180.00 to Deposit Account No. 50-2626 (Order No. TPIP006).

Respectfully submitted,



John M. Lucas
Reg. No. 43,373

Transform Pharmaceuticals, Inc.
29 Hartwell Avenue
Lexington, MA 02421



Form 1449 (Modified) Information Disclosure Statement By Applicant (Use Several Sheets if Necessary)	Atty Docket No. TPIP006 Application No.: 09/994,585 Inventor D. Levinson Group 1639 Filing Date November 27, 2001
--	---

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub- Class	Filing Date
	A	2001/00169631	8/23/2001	Freitag et al.			
	B	2001/0036640 A1	11-01-2001	D'Amico			
	C	2001/0055775	12/27/2001	Shultz et al.			
	D	2002/0183938 A1	12-05-2002	Kobylecki et al.			
	E	2002/0023507	2/28/2002	Hajduk et al.			
	F	2002/0029621	3/14/2002	Hajduk et al.			
	G	2002/0032531	3/14/2002	Mansky et al.			
	H	2002/0037647	3/28/2002	Hwang et al.			
	I	2003/01240028 A1	07-03-2003	Carlson et al.			
	J	2003/0219906	11-27-2003	Giaquinta et al.			
	K	2003/0124610	07-03-2003	Kvalheim et al.			
	L	2003/0119060	06-26-2003	Desrosiers et al.			
	M	2003/0033088 A1	02-13-2003	Agrafiotis et al.			
	N	2003/0022234 A1	12-30-2003	Cawse et al.			
	O	3,899,011	8/12/1975	Curtiss			
	P	3,932,131	01-13-1976	Rolfo-Fontana			
	Q	4,399,687	8/23/1983	Collins			
	R	4,877,745	10/31/1989	Hayes et al.			
	S	4,835,711	5/30/1989	Hutchins et al.			
	T	5,417,923	5/23/1995	Bojanic et al.			
	U	5,463,564	10-31-1995	Agrafiotis et al.			
	V	5,445,934	8/29/1995	Fodor et al.			
	W	5,574,656	11-12-1996	Agrafiotis et al.			
	X	5,658,802	8/19/1997	Hayes et al.			
	Y	5,684,711	11-04-1997	Agrafiotis et al.			
	Z	5,744,305	4/28/1998	Fodor et al.			
	AB	5,763,278	6/9/1998	Sickinger et al.			
	BB	5,807,522	9/15/1998	Brown et al.			
	CB	5,832,182	11-03-1998	Zhang et al.			



	CB	5,843,767	12/1/1998	Beattie			
	DB	5,859,703	1/12/1999	Aldridge et al.			
	EB	5,901,069	05-04-1999	Agrafiotis et al.			
	FB	5,928,952	7/27/1999	Hutchins et al.			
	GB	5,956,137	09-21-1999	Lim et al.			
	HB	5,956,137	09-21-1999	Lim et al.			
	IB	5,999,255	12-07-1999	Dupee et al.			
	JB	6,003,029	12-14-1999	Agrawal et al.			
	KB	6,100,901	08-08-2000	Mohda et al.			
	LB	6,140,643	10-31-2000	Brown et al.			
	MB	6,175,816 B1	01-16-2001	Flavin et al.			
	NB	6,296,673	10/2/2001	Santarsiero et al.			
	OB	6,297,935	10/2/2001	Yoo et al.			
	PB	6,327,334 B1	12-04-2001	Murray			
	QB	6,327,334 B1	12-04-2001	Murray et al.			
	RB	6,333,501 B1	12-25-2001	Labrenz			
	SB	6,421,553 B1	07-16-2002	Costa et al.			
	TB	6,434,490 B1	08-13-2002	Agrafiotis et al.			
	UB	6,487,523 B2	11-26-2002	Jarman et al.			

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	VB	0553 539	10/6/1992	EP				
	W B	0 807 811	4/17/1997	EP				
	XB	0 882 500	10/27/1997	EP				
	ZB	0 921 396	11/19/1998	EP				
	AC	1 174 183	8/12/1999	EP				
	BC	1 174 185	7/13/2001	EP				
	CC	1 186 892	8/21/2001	EP				
	DC	94/11489	5/26/1994	WO				
	EC	96/06842	3/7/1996	WO				
	FC	96/16078	5/30/1996	WO				
	GC	98/40159	9/17/1998	WO				
	HC	98/47613	10/29/1998	WO				
	IC	98/52614	11/26/1998	WO				
	JC	99/04247	1/28/1999	WO				
	KC	99/06814	2/11/1999	WO				
	LC	99/08112	2/18/1999	WO				
	MC	99/45379	9/10/1999	WO				
	NC	99/45389	9/10/1999	WO				



	OC	00/29987	5/25/2000	WO				
	PC	00/03240	1/20/2000	WO				
	QC	01/34290	05-17-2001	WO				
	RC	02/31477	4/18/2002	WO				
	SC	03/014732	02-20-2003	WO				
	TC							
	UC							

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	VC	Aldridge, P.K. <i>et al.</i> , "A Robotic Dissolution System with On-Line Fiber-Optic UV Analysis", <i>Journal of Pharmaceutical Sciences</i> , 84:8: (1995).
	W C	Andersen, G. <i>et al.</i> , "A Spreadsheet Approach to Automated Protein Crystallization", <i>J. Appl. Cryst.</i> , 29:236-240 (1996).
	XC	Anquetil, P.A. <i>et al.</i> , "Laser Raman Spectroscopic Analysis of Polymorphic Forms in Microliter Fluid Volumes", <i>Journal of Pharmaceutical Sciences</i> , Vol. 92:1: 149-160 (2003).
	YC	Beckmann, W. <i>et al.</i> , "The Effect of Additives on Nucleation: A Low Cost Automated Apparatus", <i>Journal of Crystal Growth</i> , 99:1061-1064 (1990).
	ZC	Bowtell, David D., "Options Available – from Start to Finish – for Obtaining Expression Data by Microarray", <i>Nature Genetics Supplement</i> , Vol. 21, Jan. 1999
	AD	Brodersen, D. <i>et al.</i> , "XAct: a program for construction, automated setup and bookkeeping of crystallization experiments", <i>Journal of Applied Crystallography</i> , 32:1012-1016 (1999).
	BD	Bugay, David E., "Characterization of the Solid-State: Spectroscopic Techniques" <i>Advanced Drug Delivery Reviews</i> 48 (2001) 43-65
	CD	Bullock, E. & Pyatt, E.C., "Apparatus for the growth of crystals from small volumes of solution", <i>Journal of Physics E- Scientific Instruments</i> , Vol. 5: 412-413 (1972).
	DD	Carrie, T. <i>et al.</i> , "An Automated Sampling Device for Dissolution Testing", <i>Journal of Pharm. Sciences</i> , Vol. 72, No. 8, August 1983.
	ED	Casay, G. <i>et al.</i> , "Laser scattering in a hanging drop vapor diffusion apparatus for protein crystal growth in a microgravity environment", <i>J. of Cryst. Growth</i> , 122:95-101 (1992).
	FD	Chayen, N. <i>et al.</i> , "An Automated System for Micro-Batch Protein Crystallization and Screening", <i>J. App. Cryst.</i> , 23:297-302 (1990).
	GD	Chayen, N. <i>et al.</i> , "New Developments of the IMPAX Small-Volume Automated Crystallization System", <i>Acta Cryst.</i> , D50:456-458, (1994).
	HD	Chayen, N. <i>et al.</i> , "Microbatch Crystallization under Oil – A New Technique Allowing Many Small-Volume Crystallization Trials", <i>Journal of Crystal Growth</i> 122 (1992) 176-180



	ID	Cheung, Vivian et al., "Making and Reading Microarrays" Nature Genetics Supplement, Vol. 21, Jan. 1999
	JD	Cox, J. <i>et al.</i> , "Experiments with Automated Protein Crystallization", <i>J. Appl. Cryst.</i> , 20:366-373 (1987).
	KD	Cox, M. J. et al., "An Investigation of Protein Crystallization Parameters Using Successive Automated Grid Searches", Journal of Crystal Growth, 90 (1988) July Nos. 1-3 Amsterdam.
	LD	Craw, Susan et al, "Case-Based Design for Tablet Formulation" XP-000934085, Zeneca Pharmaceuticals, UK pgs. 358-369
	M D	Creese, Ian, "Receptor Binding as a Primary Drug Screen", <u>Neurotransmitter Receptor Binding</u> 2 nd Ed. 1995
	ND	Cudney, B. <i>et al.</i> , "Screening and Optimization Strategies for Macromolecular Crystal Growth", <i>Acta Cryst.</i> , D50:414-423, (1994).
	OD	Davis, G.F. <i>et al.</i> , "Comparison of High Throughput Screening Technologies for Luminescence Cell-Based Reporter Screens", <i>Journal of Biomolecular Screening</i> , Volume 7: Number 1, (2002).
	PD	Eckstein, RJ et al, "Unattended, Robotic Drug-release Testing of Enterically Coated Aspirin", <i>Anal. Chem.</i> 1986, 58, 2316-2320.
	QD	Ferwerda, Dr. Roel et al., "The Use of FT-Raman Spectroscopy and Chemometric Procedures in the Analysis of Pharmaceuticals," Nicolet Instrument Corporation, Pamphlet
	RD	Findlay, W. Paul et al., "Utilization of Fourier Transform-Raman Spectroscopy for the Study of Pharmaceutical Crystal Forms", <i>Journal of Pharm. And Biomedical Analysis</i> , 16 (1998) 921-920
	SD	Fodor, Stephen P., "Massively Parallel Genomics", <i>SCIENCE Magazine</i> , Vol 277, July 15 1997 pgs. 393-394
	TD	Fodor, Stephen P. et al., "Light-directed, Spatially Addressable Parallel Chemical Synthesis" <i>SCIENCE magazine</i> , Vol. 251, Number 499, Feb., pgs 767-773
	UD	Food and Drug Administration, 1997, "International Conference on Harmonisation; Draft Guideline on Impurities: Residual Solvents; Availability", <i>Federal Register</i> 62:24302-24309
	VD	Gilliland, G. <i>et al.</i> , "Screening for Crystallization Conditions and Robotics", <i>Acta Cryst.</i> , D50:408-413 (1994).
	W D	George, Ronald et al., "Automated Dissolution Testing of Sustained Release Tablets" <i>American Laboratory</i> , February 1988
	XD	Gold, Gerald et al., "Effects of Selected USP Talcs on Acetylsalicylic Acid Stability in Tablets", <i>Journal of Pharm. Sciences</i> , Vol. 53, No. 1, Jan 1964
	YD	Gonzalez, F. <i>et al.</i> , "Crocodile: An Automated Apparatus for Organic Crystal Growth From Solution", <i>Acta Astronautica</i> , 25:12:775-784 (1991).



	ZD	Gordon, Eric M. et al., "Applications of Combinatorial Technologies to Drug Discovery. 2. Combinatorial Organic Synthesis, Library Screening Strategies, and Future Directions", <i>Journal of Medicinal Chemistry</i> , Vol. 37, No. 10, May 13, 1994
	AE	Jancarik, J. <i>et al.</i> , "Fast Communications", <i>J. of App. Cryst.</i> , 24: 409-411 (1991).
	BE	Kelders, H. <i>et al.</i> , "Automated protein crystallization and a new crystal form of a subtilisin: eglin complex", <i>Protein Engineering</i> , Vol. 1:4:301-303, (1987).
	CE	Kuball, M., "Raman Spectroscopy of GaN, AlGaIn and AlN for process and growth monitoring/control ", <i>Surface and Interface Analysis</i> , 31:987-999 (2001).
	DE	Lamparter, E. et al., "The Automation of Dissolution Testing of Solid Oral Dosage Forms", <i>Journal of Pharmaceutical & Biomed Analysis</i> , Vol.10, Nos. 10-12, pp 727-733, 1992
	EE	Lenczewski, Melissa E. et al., "Automated Screening Method for Determining Optimum Preservative Systems for Personal and Home Care Products", <i>Journal of AOAC International</i> Vol. 18, No. 3, 1998
	FE	Lennernas, Hans, "Human Intestinal Permeability", <i>Journal of Pharm Sciences</i> , vol. 87, No. 4, April 1998.
	GE	Lindsey, J. <i>et al.</i> , "Robotic work station for microscale synthetic chemistry: On-line absorption spectroscopy, quantitative automated thin-layer chromatography, and multiple reactions in parallel", <i>Rev. Sci, Instrum.</i> , 59:6:940-950(1998).
	HE	Littlechild, J.A., "Protein Crystallization: Magical or Logical: Can we Establish Some General Rules?", <i>Journal of Physics D: Applied Physics</i> 24 (1991) Feb 14, No. 2, Bristol GB
	IE	Lo, Su-Chin et al., "Automated Drug Dissolution Monitor that Uses a UV-Visible Diode Array Spectrophotometer", <i>Journal of Pharm. Sciences</i> , Vol.82, No. 4, April 1993.
	JE	Longmire, M.L., et al., "Polymorph Analysis by Dispersive Raman Spectroscopy", Nicolet Spectroscopy Research Center, Madison, WI USA
	KE	Luque de Castro, M.D. et al., "Automation of Pharmaceutical Dissolution Testing by Flow Injection Analysis", <i>Journal of Pharm & Biomedical Analysis</i> , Vol. 8, No. 4, pgs 339-336 1990
	LE	Mann, Matthias, "Quantitative Proteomics?" <i>Nature Biotechnology</i> Vol. 17, October 1999
	ME	Marshall, Andrew et al., "DNA Chips: An Array of Possibilities" <i>Nature Biotechnology</i> Volume 8, Jan 1998.



	NE	Martin, PA et al., "Automation of Microtitier Plate-chromogenic Substrate LAL Endotoxin Assay Method by Use of a Modified Cetus Pro/Pette Express System" <i>Journal of Parenteral Science & Technology</i> , vol. 40, No. 2, March-April 1986.
	OE	Matousek et al., "Flourescence Suppression in Resonance Raman Spectroscopy Using a High-Performance Picosecond Kerr Gate", <i>Journal of Raman Spectroscopy</i> 2001, 32: pgs. 983-988
	PE	McFarland, Eric W. et al., "Combinatorial Approaches to Materials Discovery", <i>Tibtech</i> March 1999 (Vol 17) pgs. 107-115
	QE	McPherson, A., "Two approaches to the rapid screening of crystallization conditions", <i>Journal of Crystal Growth</i> , 122:161-167 (1992).
	RE	Morris, D. <i>et al.</i> , "Automation of Protein Crystallization Trials: Use of a Robot to Deliver Reagents to a Novel Multi-Chamber Vapor Diffusion Plate", <i>Biotechniques</i> , Vol. 7:5:522-527 (1989).
	SE	Morris, Kenneth R. et al., "An Integrated Approach to the Selection of Optimal Salt Form for a New Drug Candidate", <i>International Journal of Pharmaceutics</i> 105 (1994) 209-217
	TE	Morris, Kenneth R. et al., "Theoretical Approaches to Physical Transformations of Active Pharmaceutical Ingredients during Manufacturing Processes", <i>Advanced Drug Delivery Reviews</i> 48 (2001) 91-114
	UE	Newman, Alan, "Send in the Robots", <i>Analy. Chem.</i> , 62:1:29-34 (1990).
	VE	Oldfield, T. <i>et al.</i> , "A Flexible Approach to Automated Protein Crystallization", <i>J. Appl. Cryst.</i> , 24:255-260 (1991).
	WE	Otsuka, Makoto et al., "Physicochemical Characterization of Glybuzole Polymorphs and their Pharmaceutical Properties", <i>Drug Development and Industrial Pharmacy</i> , 25 (2) 197-203 (1999)
	XE	Papas, Andrew N. et al., "Evaluation of Robot Automated Drug Dissolution Measurements" <i>Analytical Chemistry</i> , vol. 57, No. 7, June 1985
	YE	Persidis, Aris, "An Ambitious Drug Development Platform Attempts to Link Gene Sequence to Expressed Phenotype under Various Physiological States", <i>Nature Biotechnology</i> , Volume 16, April 1995
	ZE	Petty, C. et all, "Applications of FT-Raman Spectroscopy in the Pharmaceutical Industry", <i>Nicolet Instruments Pamphlet</i>
	AF	Petty, C. <i>et al.</i> , "The use of FT-Raman Spectroscopy in the Study of Formulated Pharmaceuticals", <i>Nicolet Instruments Pamphlet</i> undated.
	BF	Ramsey, Graham., "DNA Chips: State of the Art", <i>Nature Biotechnology</i> , Vol. 16, Jan 1998.
	CF	Rivas, Laura et al, "Conformation Study of AZT in Aqueous Solution and Adsorbed on a Silver Surface by Means of Raman Spectroscopy", <i>Journal of Raman Spectroscopy</i> , 2001, 33: 6-9



	DF	Rosch, P. <i>et al.</i> , "Chemotaxonomy of Mints of Genus <i>Mentha</i> by Applying Raman Spectroscopy", Wiley InterScience - www.interscience.wiley.com DOI:10.1002/bip.10099 (2002).
	EF	Rubin, B. <i>et al.</i> , "Minimal intervention robotic protein crystallization", <i>Journal of Crystal Growth</i> , 110: 156-163 (1991).
	FF	Shah, Ketan <i>et al.</i> , "Automated Analytical Systems for Drug Development Studies, II-A System for Dissolution Testing", <i>Journal of Pharmaceutical & Biomedical Analysis</i> , Vo. 12, No. 12, pp 1519-1527
	GF	Shah, Ketan P. <i>et al.</i> , "Automated Analytical Systems for Drug Development Studies 3. Multivessel Dissolution Testing System Based on Microdialysis Sampling", <i>Journal of Pharmaceutical and Biomedical Analysis</i> 13 (1995) 1235-1241
	HF	Shaw, P. <i>et al.</i> , "Practical experimental design techniques for automatic and manual protein crystallization", <i>Journal of Crystal Growth</i> : 196:665-673, (1999).
	IF	Sobriano, T.M. <i>et al.</i> , "ASTEC: an Automated System for Sitting-Drop Protein Crystallization," <i>Journal of Applied Crystals</i> , 26: 558-562 (1993).
	JF	Song, CX <i>et al.</i> , "Controlled Release of U-8683 from Double-Layer Biodegradable Matrices: Effect of Additives on Release Mechanism and Kinetics", <i>Journal of Controlled Release</i> 45 (1997) 177-192
	KF	Stephenson, Gregory A. <i>et al.</i> , "Characterization of the Solid State: Quantitative Issues" <i>Advanced Drug Delivery Reviews</i> 48 (2001) 67-90
	LF	Tisone, T., "Dispensing systems for miniaturized diagnostics", <i>IVD Technology</i> , 1998.
	MF	Van de Poll, S.W.E. <i>et al.</i> , " <i>In Situ</i> investigation of the chemical composition of ceroid in human atherosclerosis by Raman spectroscopy", <i>Journal of Raman Spectroscopy</i> , 33:544-551 (2002).
	NF	Vippagunta, Sudha R. <i>et al.</i> , "Crystalline Solids" <i>Advanced Drug Delivery Reviews</i> , 48 (2001) 3-26
	OF	Ward, Keith B. <i>et al.</i> , "Automatic Preparation of Protein Crystals Using Laboratory Robotics and Automated Visual Inspection", <i>Journal of Crystal Growth</i> 90 (1988) 325-339
	PF	Wehrens, R., <i>et al.</i> , "Mixture Modelling of medical magnetic resonance data", <i>Journal of Chemometrics</i> , 16:274-282 (2002).
	QF	Yakovlev, Y. <i>et al.</i> , "A Laboratory Apparatus for Crystal Growth from Solution", <i>Instruments and Experimental Techniques</i> , Vol. 41:2: 292-296 (1998).
	RF	Yu, Lian, "Amorphous Pharmaceutical Solids: Preparation, Characterization and Stabilization" <i>Advanced Drug Delivery Reviews</i> 48 (2001) 27-42
	SF	Zhu, Haijian <i>et al.</i> , "Influence of Water Activity in Organic Solvent + Water Mixtures on the Nature of Crystallizing Drug Phase. 1. Theophylline," <i>International Journal of Pharmaceutics</i> , 135 (1996) 151-160



	TF	Zeelen, J. <i>et al</i> , "Crystallization Experiments with 2-Enoyl-CoA Hydratase, Using an Automated 'Fast-Screening' Crystallization Protocol", <i>Acta Cryst.</i> , D50:443-447 (1994).
Examiner		Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.